DT02 Rec'd PCT/PTO 2 2 FEB 2005

•				180-01-01/1-10
ORM PT	O-1390	(Modified) U.S. PATENT AND TRADEMA	ARK OFFICE; U.S. DEPARTMENT OF COMMERCE	ATTORNEY'S DOCKET NUMBER
REV. 12-	·2004) TRA	NSMITTAL LETTER 1	TO THE UNITED STATES	112857-534
			D OFFICE (DO/EO/US)	U.S. APPLICATION NO. (If known, see 37 CFR 1.5)
				10/512,131
			SION UNDER 35 U.S.C. 371	PRIORITY DATE CLAIMED
NTERI		ONAL APPLICATION NO.	INTERNATIONAL FILING DATE February 19, 2004	March 20, 2003
51.F.		CT/JP04/001952	February 19, 2004	
	~~~	VENTION  DUCTOR LIGHT EMITTING	ELEMENT, MANUFACTURING METH	OD THEREOF, INTEGRATED
SEMI	CONI	DUCTOR LIGHT EMITTING	DEVICE, MANUFACTURING METHOI	O THEREOF, IMAGE DISPLAY DEVICE
		(S) FOR DO/EO/US		
Okuya		_		
J				
Applica	ant he	rewith submits to the United State	es Designated/Elected Office (DO/EO/US) the	following items and other information:
1.			ems concerning a submission under 35 U.S.C.  IENT submission of items concerning a submiser.	
2.	$\boxtimes$	This is a SECOND or SUBSEQUE	ris national examination procedures (35 U.S.C.	2. 371(f)). The submission must include items (5), (6),
3.		(9) and (24) indicated below.	giii national examination procedures (65 0.6.6	
4.		The US has been elected (Article	e 31).	
5.			cation as filed (35 U.S.C. 371 (c)(2))	
	. —		uired only if not communicated by the Internat	tional Bureau).
			ed by the International Bureau.	
			application was filed in the United States Rece	siving Office (RO/US).
6.			of the International Application as filed (35 U.S	
	_	a.  is attached hereto.		
		b.  has been previously su	ubmitted under 35 U.S.C. 154(d)(4).	
7.		Amendments to the claims of the	e International Application under PCT Article 1	9 (35 U.S.C. 371 (c)(3))
		a.  are attached hereto (re	equired only if not communicated by the Interna	ational Bureau).
			ated by the International Bureau.	
		c.  have not been made; I	nowever, the time limit for making such amend	lments has NOT expired.
l		d.  have not been made a	and will not be made.	
8.		An English language translation	of the amendments to the claims under PCT	Article 19 (35 U.S.C. 371(c)(3)).
9.		An oath or declaration of the inv	rentor(s) (35 U.S.C. 371 (c)(4)).	·
10.		An English language translation Article 36 (35 U.S.C. 371 (c)(5))	of the annexes to the International Preliminary	y Examination Report under PCT
11.		A copy of the International Preli	minary Examination Report (PCT/IPEA/409).	
12.		A copy of the International Sear		
1,	ems 1	13 to 23 below concern docume		
13.	⊠ ⊠	An Information Disclosure Stat	ement under 37 CFR 1.97 and 1.98.	
14.		An assignment document for re	cording. A separate cover sheet in complianc	e with 37 CFR 3.28 and 3.31 is included.
15.		A FIRST preliminary amendme		
16.		A SECOND or SUBSEQUENT		
17.		A substitute specification.		
18.		A power of attorney and/or cha	nge of address letter.	
19.		A computer-readable form of the	ne sequence listing in accordance with PCT Ru	ule 13ter.2 and 37 CFR 1.821 - 1.825.
20.		A second copy of the published	I International Application under 35 U.S.C. 154	4(d)(4).
21.		A second copy of the English la	anguage translation of the International Applica	ation under 35 U.S.C. 154(d)(4).
22.	$\boxtimes$	<b>\</b>	EV 351195750 US	
23.	$\boxtimes$	Other items or information:		
1		Return Receipt Postcard.		
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1				



PTO-1390 (Rev. 12-2004)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

U.S. APPLICATION NO (if known, see 37 CFR 1.5) INTER				INTERNATIONAL APPLICATION NO. ATTORNEY'S DOCKET NUMBER			
£ .	10/512,131		PCT/JP04	1/0019	52	112857-	534
24. The following	g fees are submitte					Applicant use	Office use
☐ a) Basic nat	ional fee				. \$300.00	\$ \$0.00	
□ b) Examination fee						\$ \$0.00	
☐ c) Search fe	e				\$500.00	\$ \$0.00	
тот	AL OF ABOVE	CALCULA	TIONS =		\$1000.00	s \$0.00	
Additional fe sequence lis \$250 for each	e for specification ting or computer p th additional 50 sho	and drawings rogram listing eets of paper	filed in paper over 10 filed in an electronic or fraction thereof.	0 shee mediu	ts (excluding n). The fee is		
Total Sheets	Extra Sheets	Number o	f each additional 50 o eof (round <b>up</b> to a wh	r	RATE		
- 100 =	/50 =			,	\$250.00	\$ \$0.00	
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CLAIMS	NUMBER F	ILED N	IUMBER EXTRA		RATE		
Total claims		- 20 =	0	×	\$50.00	\$ \$0.00	
Independent clai	ms	- 3=	0	×	\$200.00	\$ \$0.00	
MULTIPLE DEPI	ENDENT CLAIMS	(if applicable)		+	\$360.00	\$ \$0.00	)
	TOTAL OF ABOVE CALCULATIONS = \$ \$0.00						
Applicant clared by		tatus. See 37	CFR 1.27. The fees in	ndicate	ed above are	\$ \$0.00	)
ieduced by	1/2.			SI	JBTOTAL =	\$ \$0.00	)
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).							
	TOTAL NATIONAL FEE = \$ \$0.00						
Fee for recording accompanied by	the enclosed ass	gnment (37 C	FR 1.21(h)). The ass CFR 3.28, 3.31). \$40	ignme per pi	nt must be roperty +	\$ \$0.00	)
			TOTAL FEE	ES EN	NCLOSED =	\$ \$0.00	
			Amou	nt to	be refunded:		\$
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a.	in the amount of	B	to cover the a	bove f	ees is enclosed	i.	
b. Delease A duplic	charge my Depositate copy of this sh	Account No.	i			to cov	ver the above fees.
	c.  The Director is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No.  02-1818 . A duplicate copy of this sheet is enclosed.						
d. Fees ar	- e to be charged to ation should not t	a credit card.	WARNING: Information this form. Provide	ion on credit	this form may b	pecome public. Credit and authorization on	card PTO-2038.
NOTE: Where	an appropriate tin	ne limit unde		ot be	en met, a petiti	on to revive (37 CFR	
SEND ALL COR	RESPONDENCE	TO:					
Thomas C. Bas					SIGNATUR	E	
BELL, BOYD P.O. Box 1135	& LLOYD LLC				Thomas C	C. Basso	
Chicago, Illino	is 60690-1135				NAME		
					46,541		
					REGISTRA	TION NUMBER	

## 2 2 FEB 2005 DT02 Rec'd PCT/PTO

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Appl. No.: Okuyama et al. 10/512,131

Intnl. Appl. No.: PCT/JP04/001952

Conf. No.:

Unknown

Filed:

October 21, 2004

Title:

SEMICONDUCTOR LIGHT EMITTING ELEMENT, MANUFACTURING

METHOD THEREOF, INTEGRATED SEMICONDUCTOR LIGHT

EMITTING DEVICE, MANUFACTURING METHOD THEREOF, IMAGE

DISPLAY DEVICE, MANUFACTURING METHOD THEREOF, ILLUMINATING DEVICE AND MANUFACTURING METHOD

**THEREOF** 

Art Unit:

Unknown

Examiner: Docket No.: Unknown 112857-534

Mail Stop PCT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

## **CERTIFICATE OF MAILING BY EXPRESS MAIL UNDER 37 CFR 1.10**

Sir:

I hereby certify that the following documents relating to the above-identified application:

- 1. Transmittal Letter to the U.S. Designated/Elected Office (DO/EO/US) (Duplicate);
- 2. Transmittal of Information Disclosure Statement (Duplicate);
- Supplemental Information Disclosure Statement (3 Pages); 3.
- 4. PTO Form 1449 (2 Pages);
- Cited References (40 References); and 5.
- Return Receipt Postcard 6.

are being deposited with the United States Postal Service with sufficient postage as Express Mail in an envelope addressed to:

Mail Stop Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

on February 18, 2005.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

Heather Foster	
Name of Person Mailing Correspondence	
Martin Moo	
Signature	

EV 351195750 US
Express Mail Mailing Label Number

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))			11	ket No. 857-534		
In Re Ap	oplication Of	f: Okuyama et al.				
Applic	ation No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/5	512,131	10/21/2004	Unknown	29175	Unknown	Unknown
	INTEGRAT IMAGE DIS	ED SEMICONDUCT	ITTING ELEMENT, MANUFATOR LIGHT EMITTING DEVI INUFACTURING METHOD TI THEREOF	CE, MANUFAC	CTURING METH	OD THEREOF,
			Address to: Commissioner for Paten P.O. Box 1450 Alexandria, VA 22313-14			
			37 CFR 1.97(b)			;
	The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.					
			37 CFR 1.97(c)			
2.	CFR 1.97( Final Action	b), provided that the on under 37 CFR 1	atement submitted herewith is less information Disclosure Stater .113, a Notice of Allowance at the application, and is accomp	ment is filed be under 37 CFR	efore the mailing 1.311, or an A	date of a
	☐ the	statement specified i	n 37 CFR 1.97(e);			
			OR			
	☐ the	fee set forth in 37 CF	FR 1.17(p).			

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))					[ E	cket No. 857-534
In Re Application	Okuyama et al.					
Application No.	Filing Date	Examiner		Customer No.	Group Art Unit	Confirmation No.
10/512,131	10/21/2004	Unknown		29175	Unknown	Unknown
INTEGRA' THEREOF	TED SEMICONDUC , IMAGE DISPLAY	MITTING ELEMENT TOR LIGHT EMITT DEVICE, MANUFAC D MANUFACTURIN	TING DEVI	ICE, MANUFA METHOD THE	CTURING MET	
	(Only cor	Payme	ent of Fee	fee set forth in 37	CFR 1.17(p))	
□ A check in	the amount of	is attach			(P//	
_	or is hereby authorize	ed to charge and cred		Account No. (	)2-1818	
⊠ Cre	arge the amount of edit any overpaymen arge any additional fo					
WARNING included o	: Information on thi	TO-2038 is attached is form may become credit card inform v Facsimile*	e public. C nation and	authorization	on PTO-2038.	
I certify that this account is bein	document and authoriza g facsimile transmitted lemark Office (Fax. No.	tion to charge deposit				ing deposited icient postage ddressed to
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*This certific deposit accord	atę may only be used unt.	if paying by				
	Signature		Dated:	February 18, 20	005	
Thomas C. Basso Reg. No. 46,541 Bell, Boyd & Lloyd P.O. Box 1135 Chicago, Illinois 60 Telephone: (312) 80	690-1135					
cc:						

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Appl. No.:

Okuyama et al. 10/512,131

Conf. No.:

Unknown

Filed:

October 21, 2004

Title:

SEMICONDUCTOR LIGHT EMITTING ELEMENT, MANUFACTURING

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EMITTING DEVICE, MANUFACTURING METHOD THEREOF, IMAGE

DISPLAY DEVICE, MANUFACTURING METHOD THEREOF,

ILLUMINATING DEVICE AND MANUFACTURING METHOD THEREOF

Art Unit: Examiner:

Unknown Unknown

Docket No.:

112857-534

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

#### SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 37 C.F.R. 1.97, and 37 C.F.R. 1.98, Applicants request that a citation and examination of the references cited below, and on the attached PTO-1449 form, be made during the course of examination of the above-identified application for United States patent. Pursuant to the Official Gazette Notice dated August 5, 2003, copies of the cited U.S. patents and patent applications are not included as this application was filed after June 30, 2003. However, copies of all other cited references are included with this form.

## **U.S. PATENT DOCUMENTS**

<u>Document No.</u> 5,177,405	<u>Date</u> 01-05-93	<u>Inventor</u> Kusuda et al.
5,727,008	03-10-98	Koga
5,732,098	03-24-98	Nisitani
5,814,839	09-29-98	Hosoba
5,828,088	10-27-98	Mauk
5,981,977	11-09-99	Furukawa et al.
6,252,255	06-26-01	Ueta et al.
6,320,209	11-20-01	Hata et al.

## **FOREIGN PATENT DOCUMENTS**

<u>Country</u> Japan
Japan
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Document No.	<u>Date</u> 05-30-00	<u>Country</u> Japan
2000-150391 2000-183451	06-30-00	Japan
2000-223417	08-11-00	Japan
2000-332343	11-30-00	Japan
2001-085738	03-30-01	Japan
2001-217503	08-10-01	Japan
2002-185660	12-12-02	Japan
WO 97/44612	11-27-97	PCT
WO 02/07231	01-24-02	PCT

## **OTHER DOCUMENTS**

- Zheleva et al., "Pendeo-epitaxy a new approach for lateral growth of gallium nitride structures," MRS Internet J. Nitride Semicond. Res. 4S1, G3.38 (1999).
- Kapolnek et al., "Spatial control of InGaN luminescence by MOCVD selective epitaxy," Journal of Crystal Growth, 189/190 (1998) pp. 83-86.
- Wang et al., "Fabrication of nanoscale structures of InGaN by MOCVD lateral overgrowth," Journal of Crystal Growth 197 (1999), pp. 48-53.
- Singh et al., "Selective Area Growth of GaN Directly on (0001) Sapphire by the HVPE Technique," MRS Internet Journal Nitride Semiconductor Research, 3, 13 (1998), pp. 1-4.
- Mao, et al., "Defects in GaN Pyramids Grown on Si(111) Substrates by Selective Lateral Overgrowth," Materials Research Society Meeting in Boston, Mass. (1998) pp. 1-6.
- Yang et al., "Single-crystal GaN pyramids grown on (111)Si substrates by selective lateral overgrowth," Journal of Crystal Growth, Vol. 204, No. 3, (1999), pp. 270-274.
- Stringfellow et al., Journal of Crystal Growth, Vol. 204, No. 3, July 11 (1999), pp. 247-418.

Applicants look forward to early and favorable consideration of this matter.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY

Thomas C. Basso Reg. No. 46,541 P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 807-4310

Dated: February 18, 2005

## INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

PTO Form 1449

Atty Docket No.	Application No.
112857-534	10/512,131
Applicant	
	ıma et al.
Filing Date	Group
10/21/2004	Unknown

		U.S. PA	TENT DOCUMENT	S		
Examiner's Initials	Document Number	Publication Date	Inventor	Class	Subclass	Filing Date If Appropriate
	5,177,405	01-05-93	Kusuda et al.			
	5,727,008	03-10-98	Koga			
	5,732,098	03-24-98	Nisitani			
	5,814,839	09-29-98	Hosoba			
	5,828,088	10-27-98	Mauk			
	5,981,977	11-09-99	Furukawa et al.			
	6,252,255	06-26-01	Ueta et al.			
	6,320,209	11-20-01	Hata et al.			

		FOREIGN	PATENT DOCUME	NTS			
Examiner's	Document	Publication				Trans	ation
Initials	Number	Date	Country	Class	Subclass	Yes	No
	56-92577	07-27-81	Japan				
	57-45583	03-15-82	Japan				
	57-52071	03-27-82	Japan				
	57-52072	03-27-82	Japan				
	57-52073	03-27-82	Japan				
	58-50577	03-25-83	Japan				
	61-156780	07-16-86	Japan				
	63-188938 .	08-04-88	Japan				
	2-263668	10-26-90	Japan				-
	03-035568	02-15-91	Japan				
	06-067044	03-11-94	Japan				
	07-199829 .	04-08-95	Japan				
	08-008217	01-12-96	Japan				
	08-255929	10-01-96	Japan				
	09-199419	07-31-97	Japan				
	10-125929 ,	05-05-98	Japan				
	10-265297	10-06-98	Japan				
	10-270801	10-09-98	Japan				

Examiner:

Date Considered:

<sup>\*</sup>Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

PTO Form 1449

Atty Docket No.	Application No.
112857-534	10/512,131
Applicant	
Okuya	ma et al.
Filing Date	Group
10/21/2004	Unknown

			PATENT DOCUME	NTS		·	
Examiner's	Document Publication					Translation	
Initials	Number	Date	Country	Class	Subclass	Yes	No
-	10-312971	11-24-98	Japan				
	10-321910	12-04-98	Japan				
	11-075019	03-16-99	Japan				
	11-177138	07-02-99	Japan				
	11-238687	08-31-99	Japan				
	, 11-251253	09-17-99	Japan				
-	11-274568	10-08-99	Japan				
	. 11-312840	11-09-99	Japan				
	11-346004	12-14-99	Japan				
	. 11-514136	11-30-99	Japan				
	2000-068593	03-03-00	Japan				
	, 2000-012976	01-14-00	Japan				
	2000-150391	05-30-00	Japan				
	. 2000-183451	06-30-00	Japan				
	2000-223417	08-11-00	Japan				
	2000-332343	11-30-00	Japan				
	2001-085738	03-30-01	Japan				
	2001-217503	08-10-01	Japan				
	2002-185660	12-12-02	Japan				
	. WO 97/44612	11-27-97	PCT				
	WO 02/07231	01-24-02	PCT				
			1		1		

Examiner's Initials	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
·	Zheleva et al., "Pendeo-epitaxy – a new approach for lateral growth of gallium nitride structures," MRS Internet J. Nitride Semicond. Res. 4S1, G3.38 (1999).
	Kapolnek et al., "Spatial control of InGaN luminescence by MOCVD selective epitaxy," Journal of Crystal Growth, 189/190 (1998) pp. 83-86.
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Examiner:	Date Considered:
*Examiner: Initial if citation considered, whether or not Draw line through citation if not in conformance and no communication to applicant.	· 1
D2	

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(Use several sheets if necessary)

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Atty Docket No.	Application No.	
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Applicant	-	
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10/21/2004	Unknown	

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	Mao, et al., "Defects in GaN Pyramids Grown on Si(111) Substrates by Selective Lateral Overgrowth," Materials Research Society Meeting in Boston, Mass. (1998) pp. 1-6.
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